

Product datasheet for **MR231217**

Poln (NM_001289804) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Poln (NM_001289804) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Poln
Synonyms:	POL4P
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>MR231217 representing NM_001289804
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAAATGGAAAATTATGAGGCATGTGTAGGTTTTGATGTCTGTGAGATACCCCTCTGCTGTTGCTC
 AGAAGATTATGTCTGCTATGCGTTCAGGTGATTCATGGATTCTAGGAATGAGGGAGAGAGTACAAACAC
 TTCAAAGTGCCAAAGAATCCAGTGTTCACTACTCAGTATTAGCTGAACATGAGGAGACTCAATCACTA
 GGAACAAAGAACCCCGAGTCATTAATAACCCAGACACCAAGAGGATCCATTGAGCTCTGTCTCAGCCCT
 CCATTACTAAGCTCACATGTCAGCTCTCTGCTGGTCAAGTACAGAACAGCATCAGCTCATTGGGTCTTTC
 CAGTTATTTAATCCACAGTGTGATCAGGAAGCTTCAGTTTTACCGAACATGGAGCATAAGAGACAGCAT
 TTCCTAAAGAAAATATAGGCAAAGAAGATAAGGACAACCTCGAGTCTTAAAAGAAAATATATTACATGTA
 GTAATCCTCAGAAAAAGCAAGTAAACACACAGCTCTGGAAAAAGATACTGATGGGACTGAATCCTGGCC
 AAACCTCCAGGGACACAAGAGCTTTGGGGAAAGGCTGTGTGATGTTAGATATTTGGGTGATTTGGCCAAA
 GCCCAGCTGATGGATGCTCTCAAGCAGGACAGCAGCCCTGGTGGTACATTGATGTACAAGGATGGTTCCA
 CACAGCTGAGCGCCAAGGAGGCTTAACTTGTACTGTTAAAGGAATTGTAGTGTTACTAAAAAGCCATGT
 AGGCAACAGCACTCTGACTCTCCAGCCATGGTGGTGTCTGGAAAAGGACTTCATATCCGAAGATCAC
 TGTGTCTACATACATACGGAGCATTCCCCTTCTGGGACCCAAAGCAAGAAGCACATAGTCTATTTGTCA
 GGAACATACTGTTTTGGACACTGAGGTGTAATGTCCCCTGTTGTTTTAATGCCAAGGACTTTGTGAG
 AACAGTGTGCAGCTCTATGGTGAAGATGGCAGTTGGAAGCATGTTGTGATTTTGTAGGACTAGATCCC
 AGAGTTGCTGCATGGCTCATAGACCCAGTGACACTGCACCTTCATTTGAAGATTTAGTAGCAAAACACC
 TAGAAAAAGTCCATCACAGTCAAACCAAGCAGCATTTCAGAGAAGCCTCAAGAAATACTTTGAGTCAGAA
 TGTATTTATGAATCTGAAGATACTCTACGACCTTACAATGGATCTTTGTTCTAAGTTGAAGGCTTATGGC
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 TTCAGTTGACAAAGAAGAAATGGAGAGGACATCGGCACTCCTCGGGGCTCGCCTCAAGGAATTGGAGCA
 AGAAGCCCATTTTGTGAGGAGAACAGTCTTATAATGAGTAATAATCAACTTCGTGAGATCCTCTTT
 GGCAAGTTGAAGCTGCATTTGTTGAGTCAGAGGAAACATCTCCAGAAGTGGGCTGCAGAACAGCTGT
 CCACATCAGAAGCCATGTTAAATCTCTACAAGACCTTCAACCATTACCCAAGTTAATTTTGAATATAG
 ACAGGTTACAAGATCAAGTCAACTTTTATAGATGGATTACTAGCTTATATGAAAAAGGCTCCATCTCT
 TCTACATGGAATCAGACTGGAAGTGTGACAGGGAGACTTTCAGCCAAGCATCCAAATATCCAGGGTATCT
 CCAAGCACCAATTAAGATTTCTAAGCCTTGGAAATTTAAAGGTAAGAAGAGGAGACTGTCAACCATCTC
 ACCAAGAACCCTGTTTGTGTCCTCTGAAGGCCACACCTTCTGGCAGCAGACTTTTCACAGATTGAATTG
 CGCATTCTTGACATTTATCTGGGGATCCAGAGCTTTTGAAGTATTCCAGGAATCTGAAAGAGATGATG
 TATTTTCTACCCTGACTTCACAGTGAAGGACATTTCCATAGAGCGTGTGACACACATGGACAGAGAACA
 AACCAAGAAAGTGGTGTACTCCGTGGTCTATGGAGCTGGCTATGTGACATCCATCTTGGGTAGAAGGAGG
 CCTCTCCCAGGATCTGTGCACAGGACCAGCAGCTTCGGGCACAAGCAGAGCCAGGCAGTAACTTTG
 TGGTACAAGGCTCAGCCGACAGCTCTGTAAGCTAGCCATGATTCGCATCTCTACTGCAGTAGCCACATC
 CCCGACCTTGACAGCCAGGTTAGTTGCCAAATTCATGATGAGCTGCTTTTGAAGTGAAGACACTCAG
 GTCCTGAGTTTGCAGCTTTGTCAGAAGGATCATGGAGTCTTGAACAGGTACAGACCTTGAAGTGC
 AGCTGCAGGTGCCCTAAAAGTGAAGTGTGAGTGTGGCCGCTCATGGGGACACCTGACCCCACTGCAGGA
 GATCCTGGGCTCAGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR231217 representing NM_001289804
 Red=Cloning site Green=Tags(s)

MKMENYEACVGFVDVCEIPLSAVAQKIMSAMRSGDFMDSRNEGESTNTSKVAKKSSVHYSVLAHEEETQSL
 GTKNPESLITQTPRGSIELCPQPSITKLTCLQSAGVQNSISSLGLSSYLIPQCDQEASVLPNMEHKRQH
 FLKENIGKEDKDNSSLKRKYITCSKSSEKASKHTALEKDTDGTESWPNSRDTRALGERLCDVRYLGDLAK
 AQLMDALKQAAALVVTLMYKDGSTQLSAKEALTCTVKGI VVLLKSHVGNSTLTLPAHGGALEKDFI SEDH
 CVYIHTHEHSPFWDPKQEAHSLFVRNILFWTLRCKCPVVCFNAKDFVRTVLQLYGEDGSKWHVADDFVGLDP
 RVAAWLIDPSDTAPSFEDLVAKHLEKSITVKPSSTFREASRNTLSQNVFMNLKILYDLTMDLCSKLYKAYG
 LWQLFCTLELPLIPILAVMENHKIPVDKEEMERTSALLGARLKELEQEAHFVAGEQFLIMSNNQLREILF
 GKLLHLLSQRKHLPRGLQNQLSTSEAMNSLQDLHPLPKLILEYRQVHKIKSTFIDGLLAYMKGKGSIS
 STWNQGTGTGRLSAKHPNIQGISKHPKISKPWNFKGKEEETVTISPRTLFSVSEGHFLAADFSQLIEL
 RILAHLSGDPELLKLFQESERDDVFSTLTSQWKDPIERVTHMDREQTKKVVYSVVYAGYVTSILGRRR
 PLPRICAQDQQLRAQAERQAVNFVVGSAADLCKLAMIRISTAVATSPTLTARLVAQIHDELLFEVEDTQ
 VPEFAALVRRIMESLQQVQTLELQLQVPLKVNLSVGRSWGHLTPLQEILGSA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001289804

ORF Size: 2466 bp

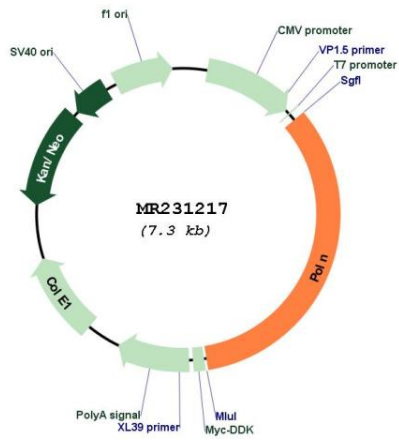
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_001289804.1, NP_001276733.1</u>
RefSeq Size:	2911 bp
RefSeq ORF:	2469 bp
Locus ID:	272158
UniProt ID:	<u>Q7TQ07</u>
Cytogenetics:	5 B2
MW:	92.5 kDa
Gene Summary:	DNA polymerase with very low fidelity that catalyzes considerable misincorporation by inserting dTTP opposite a G template, and dGTP opposite a T template. Is the least accurate of the DNA polymerase A family (i.e. POLG, POLN and POLQ). Can perform accurate translesion DNA synthesis (TLS) past a 5S-thymine glycol. Can perform efficient strand displacement past a nick or a gap and gives rise to an amount of product similar to that on non-damaged template. Has no exonuclease activity. Error-prone DNA polymerase that preferentially misincorporates dT regardless of template sequence. May play a role in TLS during interstrand cross-link (ICL) repair. May be involved in TLS when genomic replication is blocked by extremely large major groove DNA lesions. May function in the bypass of some DNA-protein and DNA-DNA cross-links. May have a role in cellular tolerance to DNA cross-linking agents. Involved in the repair of DNA cross-links and double-strand break (DSB) resistance. Participates in FANCD2-mediated repair. Forms a complex with HELQ helicase that participates in homologous recombination (HR) repair and is essential for cellular protection against DNA cross-links.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR231217